

CONTENTS

Volume 22, Number 1 January 1991

- 1 Fecundity changes in *Macrobrachium rosenbergii* (de Man) during egg incubation
ANG KOK JEE & LAW YEAN KOK
- 7 Hatching of the queen conch, *Strombus gigas* L., based on early life studies
L. A. RODRIGUEZ GIL, J. OGAWA & C. A. MARTINEZ-PALACIOS
- 15 Use of xylocaine, potentiated with sodium bicarbonate, as an anaesthetic for fry and juveniles of acumara, *Algansea lacustris* Steindachner 1895, from Lake Patzuaró, Michoacán, Mexico
H. RIVERA LOPEZ, A. ORBE MENDOZA & L. G. ROSS
- 19 Duration of eleutheroembryonic phase of *Coregonus albula* (L.) larvae reared at different constant and variable temperatures
D. DOSTATNI & M. LUCZYNSKI
- 25 Preliminary experiments on the development of extensive culture methods for juvenile sole, *Solea solea* (L.)
J. JINADASA, B. R. HOWELL & S. M. BAYNES
- 37 Use of small-scale nutrient-film hydroponic technique to reduce mineral accumulation in aquarium water
R. CLARKSON & S. D. LANE
- 47 Effects of attractants on start of feeding of glass eel, *Anguilla anguilla* L.
A. KAMSTRA & L. T. N. HEINSBROEK
- 57 A review of eel culture in Japan and Europe
L. T. N. HEINSBROEK
- 73 A brief review of the status and practices of the reservoir fishery in mainland China
S. S. DE SILVA, YU ZHITANG & XIANG LIN-HU
- 85 Estimates of the annual loss of Atlantic salmon, *Salmo salar* L., in Norway due to acidification
T. HESTHAGEN & L. P. HANSEN
- 93 Production, growth, condition and angling vulnerability of zander, *Stizostedion lucioperca* (L.), in relation to the availability of prey fish in ponds
A. J. P. RAAT
- 105 Influence of pre-stocking feeding levels on catchability of rainbow trout, *Oncorhynchus mykiss* (Walbaum), in a small fishery
M. G. PAWSON & C. E. PURDOM
- 113 Invertebrates on cut weed removed during weed-cutting operations along an English river, the River Frome, Dorset
F. H. DAWSON, E. M. F. CLINTON & M. LADLE
- 123 **Book Reviews**

Volume 22, Number 2 April 1991

- 125 Genetic variation in mortality of chinook salmon, *Oncorhynchus tshawytscha* (Walbaum), challenged with high water temperatures
T. D. BEACHAM & R. E. WITHLER

- 135 Oxygen-induced gas bubble disease in rainbow trout, *Oncorhynchus mykiss* (Walbaum)
D. A. EDSALL & C. E. SMITH
- 141 Hatchery production of Florida red tilapia seed in brackishwater tanks: the influence of broodstock age
S. J. SMITH, W. O. WATANABE, J. R. CHAN, D. H. ERNST, R. I. WICKLUND & B. L. OLLA
- 149 Effect of body colour of *Oreochromis mossambicus* (Peters) on predation by largemouth bass, *Micropterus salmoides* (Lacepède)
D. TAVE, M. REZK & R. O. SMITHERMAN
- 155 Comparison of live food organisms and prepared diets as first food for paddlefish, *Polyodon spathula* (Walbaum), fry
C. D. WEBSTER, S. D. MIMS, J. H. TIDWELL & D. H. YANCEY
- 165 The food and feeding of tropical marine fishes in floating net cages: Asian seabass, *Lates calcarifer* (Bloch), and brown-spotted grouper, *Epinephelus tauvina* (Forsk.)
A. G. J. TACON, N. RAUSIN, M. KADARI & P. CORNELIS
- 183 Use of night-lights to attract food organisms into tropical marine fish cages
A. G. J. TACON, N. RAUSIN, M. KADARI & P. CORNELIS
- 193 Production economics of shellfish aquaculture in Atlantic Canada: a preliminary analysis
S. S. COFFEN & A. T. CHARLES
- 203 Gametogenesis and spawning in the carpet-shell clam, *Ruditapes decussatus* (L.) (Mollusca: Bivalvia), from the Atlantic coast of Morocco
M. S. SHAFEE & M. DAOUDI
- 217 Production planning and the management of information on fish farms: results of a UK survey
P. VARVARIGOS
- 229 Taxonomic status and genetic differentiation among West African populations of the *Chrysichthys auratus* complex (Pisces, Siluriforme), based on protein electrophoresis
J.-F. AGNESE
- 239 Powan, *Coregonus lavaretus* (L.), ova predation by newly introduced ruffe, *Gymnocephalus cernuus* (L.), in Loch Lomond, Scotland
C. E. ADAMS & R. TIPPETT
- 247 Comparison of the performance of brown trout, *Salmo trutta* L., and rainbow trout, *Oncorhynchus mykiss* (Walbaum), in a put-and-take fishery
M. G. PAWSON

Short Communications

- 259 Acute toxicity of ammonia to *Penaeus japonicus* Bate juveniles
YAU-ZIN KOU & JIANN-CHU CHEN
- 265 Effect of using ram testis in a fry diet for *Oreochromis niloticus* (L.) on growth, survival and resultant phenotypic sex ratio
G. S. HAYLOR & A. B. PASCUAL
- 269 **Book Reviews**

Volume 22, Number 3
July 1991

- 277 Food selection, electivity and dietary overlap among planktivorous Chinese and Indian major carp fry and fingerlings grown in extensively managed, rain-fed ponds in Bangladesh
D. DEWAN, M. A. WAHAB, M. C. M. BEVERIDGE, M. H. RAHMAN & B. K. SARKAR
- 295 Growth induction of common carp, *Cyprinus carpio* L., fry as a function of plankton density and improved water quality
RINA CHAKRABARTI & B. B. JANA
- 309 A mistaken method for correcting potential bias in genetic testing of common carp, *Cyprinus carpio* L., and tilapias, *Oreochromis* spp.
G. W. WOHLFARTH, A. NAGY & B. J. McANDREW
- 317 Effect of temperature on the hatching success of the eggs of Japanese whiting, *Sillago japonica* Temminck & Schlegel, during the spawning season
M. S. KHAN, M. S. ZAKARIA, M. A. AMBAK, M. J. ALAM, M. KASHIWAGI & T. IWAI
- 323 Effect of salinity on growth and survival of sleeper goby, *Batanga lebretonis* (Steindachner) (Pisces: Eleotridae)
C. A. ONADEKO & K. KUSEMIJU
- 329 Dietary accumulation of polychlorinated biphenyls, chlorinated pesticides and mercury by cultivated eels, *Anguilla anguilla* L.
J. DE BOER & H. PIETERS
- 335 Seasonal production of rainbow trout, *Oncorhynchus mykiss* (Walbaum), in ponds using different feeding practices
J. H. TIDWELL, C. D. WEBSTER & R. S. KNAUB
- 343 Effects of baffles and isolation on dorsal fin erosion in steelhead trout, *Oncorhynchus mykiss* (Walbaum)
G. A. KINDSCHL, H. T. SHAW & D. S. BRUHN
- 351 Respiratory responses of the crustacean *Macrobrachium vollenhovenii* (Herklots, 1857) to various salinities
P. J. UDO & M. TAEGER
- 357 Effect of smolt age on migratory behaviour of Baltic salmon, *Salmo salar* L., transplanted to the east Atlantic
L. P. HANSEN & B. JONSSON
- 363 Evaluation of Carlin tagging as a mark-recapture technique for estimating total river runs of salmon smolts, *Salmo salar* L.
G. J. A. KENNEDY, C. D. STRANGE & P. M. JOHNSTON

Short Communications

- 369 New hope of reducing the costs of mass rearing whitefish, *Coregonus lavaretus* L., larvae on a dry diet?
R. ROJAS BELTRAN & A. CHAMPAGNEULLE
- 373 Length-weight relationship and relative condition of a Malaysian freshwater catfish, *Mystus nemurus* Cuvier & Valenciennes, in Chenderoh Reservoir
M. S. KHAN, M. A. AMBAK, K. J. ANG & A. K. M. MOHSIN
- 377 Metabolic requirements of Arctic charr, *Salvelinus alpinus* (L.), under hatchery conditions
E. H. JØRGENSEN, M. JOBLING & J. S. CHRISTIANSEN

- 379 Comparison of two methods of haemoglobin measurement in rainbow trout, *Oncorhynchus mykiss* (Walbaum)
S. C. CULLOTY, T. F. CROSS & J. O'HALLORAN

Volume 22, Number 4
October 1991

- 385 Production of *Oreochromis niloticus* (L.) and ecosystem dynamics in manured ponds of three depths
J. P. SZYPER, K. D. HOPKINS & C. KWEI LIN
- 397 Digestive capabilities of three commensal fish species: carp, *Cyprinus carpio* L., tilapia, *Oreochromis aureus* \times *O. niloticus*, and African catfish, *Clarias gariepinus* (Burchell 1822)
G. DEGANI & A. REVACH
- 405 Controlled hatchery production of *Clarias gariepinus* (Burchell 1822): growth and survival of fry at high stocking density
G. S. HAYLOR
- 423 Effects of delayed feeding on growth and survival of *Channa striatus* (Bloch) larvae
V. ARUL
- 435 Temperature and feed rate effects on Chinese catfish, *Clarias fuscus* (Lacepède), growth
M. J. ANDERSON & A. W. FAST
- 443 Electrophoretic analysis of protein variation in two Spanish populations of the European seabass, *Dicentrarchus labrax* L. (Pisces, Moronidae)
G. MARTÍNEZ, I. McEWEN, B. J. McANDREW & M. C. ALVAREZ
- 457 Influence of ammonia on growth of *Penaeus monodon* Fabricius post-larvae
JIANN-CHU CHEN & CHI-CHING TU
- 463 Effects of eyestalk ablation, thoracic ganglion extract and gonad extract from 'spent spawners' on ovarian maturation in pond-reared shrimps, *Penaeus monodon* Fabricius
CHAN HOOI HAR
- 473 Larval rearing of the shrimps *Metapenaeus ensis* (de Haan) and *Penaeus chinensis* (Osbeck) on artificial feed
K. H. CHU
- 481 Variability in size at moult among individual broods of cultured juvenile lobsters, *Homarus gammarus* (L.)
J. F. WICKINS & T. W. BEARD
- 491 Use of circuli spacing on scales to discriminate hatchery and wild barramundi, *Lates calcarifer* (Bloch)
C. G. BARLOW & B. A. GREGG
- 499 Identification of wild and reared Atlantic salmon, *Salmo salar* L., using scale characters
R. A. LUND & L. P. HANSEN
- 509 Ecotoxicological analysis of the influence of an industrial effluent on fish populations in a regulated stream
J. A. CAMARGO
- 519 Resource use, growth and effects of stocking in alpine brown trout, *Salmo trutta* L.
J. H. L'ABÉE-LUND & H. SÆGROV

Short Communications

- 527 Correlation between condition factor and total lipid content in Atlantic salmon, *Salmo salar* L., parr
C. M. HERBINGER & G. W. FRIARS
- 531 Possible use of *Moina* spp. as a live feed substitute in larval rearing of the freshwater prawn, *Macrobrachium rosenbergii* (de Man)
M. J. ALAM, S. H. CHEAH & K. J. ANG
- 537 Gravel compaction and permeabilities in redds of Atlantic salmon, *Salmo salar* L.
K. I. GUSTAFSON-GREENWOOD & J. R. MORING
- 541 **Book Reviews**
- 549 **Author Index**
- 552 **Subject Index**